



# Product Data Sheet

## Deltaforge® F-87

Forging die lubricant

### DESCRIPTION

**Deltaforge® F-87** is a newly developed, high solids, cost-effective, water-based die lubricant specifically developed for hot and warm forming of ferrous metals. It contains finely processed graphite to enhance its lubricating properties and provides good metal flow. The product wets out quickly to form an effective lubricating and protective film on hot die surfaces. The interaction between the binders and graphite particles provides exceptional colloidal stability, allowing for greater extendibility with water for a cost-effective dilution for achieving the expected forging performance.

FEATURES	BENEFITS
<ul style="list-style-type: none"><li>• Non-smoking</li></ul>	<ul style="list-style-type: none"><li>• Environmentally friendly for workers</li></ul>
<ul style="list-style-type: none"><li>• Reduces frictional forces between work piece and tooling</li></ul>	<ul style="list-style-type: none"><li>• Allows for maximum die and cavity fill for producing forged parts to design intentions</li></ul>
<ul style="list-style-type: none"><li>• Excellent die coverage and film-forming properties for a uniform coating resulting in less die wear</li></ul>	<ul style="list-style-type: none"><li>• Reduced die costs and extended productivity of forging operations from less frequent die changes</li></ul>
<ul style="list-style-type: none"><li>• More extendable dilutions for successful forging performance</li></ul>	<ul style="list-style-type: none"><li>• Lower lubricant use costs</li></ul>
<ul style="list-style-type: none"><li>• Stable concentrate and dilution with low rates of graphite settlement</li></ul>	<ul style="list-style-type: none"><li>• Easier to use with less costs in lubricant preparation and dilution tank maintenance</li></ul>

### TYPICAL APPLICATIONS

- Mechanical and hydraulic press work for hot and warm ferrous forging

### PHYSICAL PROPERTIES

(as supplied)

Lubricant	:	processed graphite
Carrier	:	water
Consistency	:	gray/black creamy fluid
Solids content	:	23 - 25%
Flash point	:	none
Freezing point	:	0°C (32°F)
Weight per gallon	:	9.5
Shelf life	:	12 months from date of qualification under original seal

### METHOD OF USE

For die lubrication, a typical starting dilution ratio of 1:10 (product:water) is recommended for spray application. Depending on forging difficulty, the dilution ratio may be increased to 1:20 or higher.

To achieve best results, **Deltaforge® F-87** should be spray applied. Consult your local Henkell representative for additional lubricant and Dag® Lubrimate application equipment information.

### STORAGE/HANDLING

Do not allow product to freeze. Tightly reseal container to avoid contamination and evaporation.

### CONTAINER SIZE

500 lbs / 55-gallon drum; 2800 lbs / 300 gallon tote

### HEALTH & SAFETY

Please consult Material Safety Data Sheet.

### NOTES

The data contained herein are furnished for information only and are believed to be reliable. We cannot assume responsibility for the results obtained by others over whose

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